

CLAIMS

What is claimed:

1. A fluid delivery system, including a mounting structure, a plurality of rows of locator alignment components secured to the mounting structure, a plurality of rows of fluid connecting pieces, each having inlet and outlet ports and a fluid communication passage interconnecting the ports, the fluid connecting pieces being arranged in pairs, each pair including two of the fluid connecting pieces located next to one another in a respective row of fluid connecting components, the fluid connecting pieces of each pair being releasably held by and aligned relative to one another by a respective one of the locator alignment components, and a plurality of manifold pieces extending transverse to the rows of fluid connecting pieces, at least one manifold piece having a manifold passage with a center line crossing over a center line interconnecting the farthest ports of one of the pairs and being removable without removing the locator alignment component by which the respective pair is held from the mounting structure.

2. A fluid delivery system according to claim 1, wherein the locator alignment components are arranged in sets, each set including two of the locator alignment components next to one another in a respective row of locator alignment components, and each fluid connecting piece being held by both locator alignment components in a respective set.

3. A fluid delivery system according to claim 1, wherein a gap is defined between fluid connecting pieces of a respective pair, the manifold piece being removable out of the gap without removal of the pair from the locator alignment component holding the pair.
4. A fluid delivery system according to claim 1, which includes a plurality of locator alignment fasteners removably fastening the locator alignment pieces to the mounting structure.
5. A fluid delivery system according to claim 1, wherein the fluid alignment components are cradles.
6. A fluid delivery system according to claim 5, each cradle preventing movement of the fluid connecting pieces of a respective pair in x, y, and Θ .
7. A fluid delivery system according to claim 1, which includes a plurality of fluid control components placed in flow communication with one another through the fluid communication passages and the manifold passages.
8. A fluid delivery system according to claim 7, wherein one of the fluid control

components has an inlet passage connected to an outlet port of one of the connecting pieces of a pair, and an outlet passage connected to an inlet port of another one of the connecting pieces of the respective pair.

9. A fluid delivery system according to claim 7, wherein the fluid control components may include at least one of a valve, a regulator, a mass flow controller, a filter, and a pressure transducer.

10. A fluid delivery system according to claim 1, wherein the ports of each respective fluid connecting piece may be located into the same side of the respective fluid connecting piece.

11. A fluid delivery system according to claim 1, which includes at least one fluid T-piece having at least three ports and at least one fluid communication passage interconnecting all three ports, the T-piece being releasably held and aligned relative to one of the locator alignment components, one of the ports of the fluid T-piece being connected to the manifold piece.

12. A fluid delivery system according to claim 1, which includes at least one fluid elbow piece having at least two ports and at least one fluid communication passage interconnecting both ports, the elbow piece being releasably held and aligned

relative to one of the locator alignment components, one of the ports of the fluid elbow piece being connected to the manifold piece.

13. A fluid delivery system according to claim 1, wherein a gap is defined between the fluid connecting pieces of a respective pair, and the system further includes a purge piece between the fluid connecting pieces of the respective pair, having at least two ports, one of which is connected to the manifold piece.

14. A fluid delivery system according to claim 1, which includes a locator end piece holding and aligning one of the fluid connecting components and being smaller than the locator alignment components.

15. A fluid delivery system, including a mounting structure, at least three locator components secured to the mounting structure, at least three pairs of fluid connecting pieces, each having inlet and outlet ports and a fluid communication passage interconnecting the ports, each respective pair being releasably held and aligned by a respective one of the locator pieces, and a plurality of manifold pieces, each having a manifold passage having a center line crossing over a line interconnecting the two farthest ports of the fluid connecting pieces and being removable without removing any of the three locator components.